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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,006	04/17/2001	Manfred Gerresheim	0656-0249P	1302

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EXAMINER	
MAKI, STEVEN D	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/806,006	GERRESHEIM ET AL.	
	Examiner	Art Unit	
	Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,5,7 and 9-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5,7 and 9-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9-4-03 has been entered.

2) The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3) Claims 1, 2, 4, 5, 7 and 9-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 6 ambiguously refers to "said grooves". In claim 1 line 6, it is suggested to change "said grooves" to --said narrower grooves--.

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5) **Claims 1, 2, 4, 5, 7, 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (EP 594380) in view of Croyle et al (US 5360043), Europe '577 (EP 710577) and Verdier (US 3682220).**

Tanaka, directed to reducing noise without deteriorating wet performance for a low aspect ratio pneumatic radial tire having a size such as 205/55R15, discloses a

pneumatic radial tire having an asymmetrical tread comprising a combination of a **super wide circumferential groove** having a width of more than 16% TW in one tread half and a **narrow circumferential groove** having a width smaller than 8% TW in the other tread half. Tanaka teaches that the aspect ratio is 40-60%. One of ordinary skill in the art would readily understand that the super wide groove improves wet performance / resistance to hydroplaning. The width of the super wide groove and the narrow grooves also effectively reduces overall tread noise / air resonance noise. Tanaka does not recite using more than one narrow groove.

As to claim 1, it would have been obvious to one of ordinary skill in the art to provide at least two narrow circumferential grooves in the other tread half in Tanaka since Croyle et al, which like Tanaka discloses a low aspect ratio pneumatic radial tire having a wide groove in one half, suggests using smaller width grooves (i.e. intermediate width grooves and narrow grooves) in the other half of the tread (i.e. the outward half of the tread) in order to improve the water evacuation capacity of the tire (col. 5 lines 56-61). Croyle et al teaches that the number of intermediate grooves and narrow grooves may be varied depending on tire size. See col. 4 lines 25-26 and col. 4 lines 42-45.

As to the specific width of the wide groove, it would have been obvious to use a width of at least 35 mm for the wide groove of Tanaka since (a) Tanaka et al teaches using a width of 16% tread width for the wide groove in the low aspect ratio radial pneumatic tire and (b) Europe '577 suggests that a low aspect ratio pneumatic radial tire having wide grooves therein may have a ground contact width of 120-240 mm. With a

ground contact width of 240 mm, the groove width for the wide groove of Tanaka would be 38.4 mm (0.16x240 mm). The limitation of the narrower groove having a width of 15 mm or less would have been obvious and could have been determined without undue experimentation in view of (a) Tanaka's suggestion to provide the narrow groove with a width of less than 8% to reduce noise and improve wet performance and (b) Croyle et al's teaching to provide the intermediate grooves and narrow grooves with a width of 33-75% of the width of the wide grove and 10%-33% of the width of the wide groove.

As to the sidewalls being inclined, it would have been to one of ordinary skill in the art to slightly incline the walls of the circumferential grooves with respect to the circumferential plane in view of Verdier's teaching to incline sidewalls of a circumferential groove at a small angle 12-30 degrees in order to improve drainage or Verdier's teaching to incline the sidewalls of a circumferential groove at angle of 2-8 degrees as an alternative to orienting the sidewalls at 0 degrees. The use of perpendicular walls is not necessary in Tanaka. See claim 1 of Tanaka (EP 594380). The use of slightly inclined walls is consistent with Croyle et al and Europe '577 since each of Croyle et al and Europe '577 illustrate slightly inclined walls (see figure 2 of each reference).

As to claim 2, the claimed narrow groove width would have been obvious in view of the widths for narrower grooves suggested by Tanaka and Croyle et al.

As to claim 4, the limitation of the circumferential grooves being straight would have been obvious since Tanaka suggests using straight grooves.

As to claim 5, the claimed spacing would have been obvious in view of Croyle et al's teaching that the wide groove may be spaced 33% from one edge and a narrow groove may be spaced at 33% from one edge.

As to claim 7, it would have been obvious to provide the bottom of the wide groove of Tanaka with the claimed varying depth across its width since Verdier suggests using such a varying depth across the width of a wide groove (figure 4) to improve drainage.

As to claim 9, the limitation of the wide groove having a width of 40 mm would have been obvious and could have been determined without undue experimentation in view of Tanaka's teaching to use a wide width of at least 16% TW for a wide groove; it being noted that 0.17 x 240 mm is 40.8 mm. The limitation of narrower grooves having approximately 8 mm would have been obvious and could have been determined without undue experimentation depending on the desired water evacuation capacity in view of (a) Tanaka's suggestion to provide the narrow groove with a width of less than 8% to reduce noise and improve wet performance and (b) Croyle et al's teaching to provide the intermediate grooves and narrow grooves with a width of 33-75% of the width of the wide grove and 10%-33% of the width of the wide groove.

As to claims 10-14, it would have been obvious to include lateral grooves in Tanaka's tread since (a) Tanaka teaches that the tread may include axial grooves (col. 6 lines 2-6) and (b) Croyle et al suggests using lateral grooves with the circumferential grooves to provide the tread with water evacuation capacity. As to claim 13, the limitation of the oblique grooves having a different depths over their longitudinal extent

would have been obvious since it is taken as well known / conventional per se in the tire art to use lateral grooves having a increasing depth toward each tread edge in a tire tread in order to improve water removal / discharge. As to claims 12 and 13, it would have been obvious to use curved lateral grooves whose inclination decreases toward the shoulders of the tire as the lateral grooves since (a) Croyle et al teaches that grooves may be straight or curved (col. 2 lines 28-30) and (b) it is well known in the tread art to curve lateral grooves in a tire tread such that the inclination of the lateral grooves decreases toward the shoulders of the tire as evidenced by Europe '577.

As to claim 15, it would have been obvious to use additional circumferential fine grooves as claimed since Croyle et al teaches that the number of intermediate grooves and narrow width grooves may vary depending on tire size.

Remarks

6) Applicant's arguments with respect to claims 1-2, 4-5, 7 and 9-15 have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments regarding Europe 676305 are moot since this reference is no longer relied upon.

7) No claim is allowed.

8) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068 until Dec. 18, 2003 and (571) 272-1221 after Dec. 18, 2003. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki
December 11, 2003

STEVEN D. MAKI
PRIMARY EXAMINER
GROUP 1300
AU 1733

12-11-03